

catalyst based on the detected oxygen storage capacity. In this way, it is possible to reduce exhaust emissions and accurately detect catalyst degradation.

Specifically, claim 1 states:

A catalyst deterioration detecting apparatus for an internal combustion engine, comprising:  
a controller that:

detects an amount of oxygen stored in an upstream catalyst and an amount of oxygen stored in a downstream catalyst;

controls the amount of stored oxygen in the upstream catalyst by controlling an air-fuel ratio of gasses that flow into the catalyst based on said detected amounts;

detects an oxygen storage capacity of the upstream catalyst based on said detected amount of stored oxygen in the upstream catalyst; and

determines degradation of said upstream catalyst based on said detected oxygen storage capacity.

Unlike the approach of claim 1, Tayama et al. appears to take the opposite approach.

According to Col. 14, lines 53-58, Tayama et al. determine a saturation amount of adsorbed and adsorbed oxygen based on catalyst deterioration (emphasis added):

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saturation amounts OSC, OSaC vary together with the deterioration of the catalyst, so if the saturation amounts OSC, OSaC are calculated using the degree of catalyst deterioration as a parameter, the saturation amounts can be calculated with even higher precision.

Thus, claim 1 requires determining degradation of a catalyst based on a detected oxygen storage capacity, whereas Tayama et al. show determining saturation amounts of adsorbed and absorbed oxygen based on deterioration. As such, Applicants submit that Tayama et al. fails to anticipate claim 1. Thus, the rejection of claim 1 should be withdrawn. Further, this argument applies to each independent claim.

As another example, claim 1 also requires a controller that “detects ... an amount of oxygen stored in a downstream catalyst.” Applicants can find no such disclosure in Tayama et

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al. The Office action fails to provide any specific citation to such disclosure. Further, Tayama et al. appears to determine an amount of NOx stored in the downstream catalyst, not oxygen. See, e.g., Col. 17, for example. Thus, the rejection of claim 1 should be withdrawn. This argument also applies to claims 4, 7, and 11.

Based on the foregoing comments, the above-identified application is believed to be in condition for allowance, and such allowance is courteously solicited. If any further amendment is necessary to advance prosecution and place this case in allowable condition, the Examiner is respectfully requested to contact the undersigned by fax or telephone at the number listed below.

Please charge any cost incurred in the filing of this Amendment, along with any other costs, to Deposit Account No.06-1510. If there are insufficient funds in this account, please charge the fees to Deposit Account No. 06-1505. A duplicate copy of this sheet is enclosed.

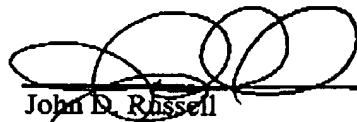
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I hereby certify that this correspondence is being sent via facsimile to the U.S. Patent and Trademark Office at (571) 273-8300 on September 27, 2005

  
Lauren Barberena

Respectfully submitted,

ALLEMAN HALL MCCOY RUSSELL &  
TUTTLE LLP



John D. Russell  
Registration No. 47,048  
Customer No. 36865  
of Attorneys for Applicants  
806 SW Broadway, Suite 600  
Portland, Oregon 97205  
Telephone: (503) 459-4141  
Facsimile: (503) 295-6679